

Borehole

50-11-08Log Event **A****Borehole Information**

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|------------------------------|---------------------------------|----------------------------------|
| Farm : <u>T</u> | Tank : <u>T-111</u> | Site Number : <u>299-W10-139</u> |
| N-Coord : <u>43,327</u> | W-Coord : <u>75,790</u> | TOC Elevation : <u>671.61</u> |
| Water Level, ft : <u>0.6</u> | Date Drilled : <u>2/28/1974</u> | |

Casing Record

| | | |
|----------------------------|-------------------------------|--------------------|
| Type : <u>Steel-welded</u> | Thickness : <u>0.237</u> | ID, in. : <u>4</u> |
| Top Depth, ft. : <u>0</u> | Bottom Depth, ft. : <u>93</u> | |
| Type : <u>Steel-welded</u> | Thickness : <u>0.280</u> | ID, in. : <u>6</u> |
| Top Depth, ft. : <u>0</u> | Bottom Depth, ft. : <u>94</u> | |

Equipment Information

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|-----------------------------------|---|------------------------------------|
| Logging System : <u>2B</u> | Detector Type : <u>HPGe</u> | Detector Efficiency: <u>35.0 %</u> |
| Calibration Date : <u>10/1997</u> | Calibration Reference : <u>GJO-HAN-20</u> | |

Logging Information

| | | |
|---------------------------------|---------------------------------|-------------------------------------|
| Log Run Number : <u>1</u> | Log Run Date : <u>1/20/1998</u> | Logging Engineer: <u>Jim Coates</u> |
| Start Depth, ft.: <u>0.0</u> | Counting Time, sec.: <u>200</u> | L/R : <u>L</u> Shield : <u>N</u> |
| Finish Depth, ft. : <u>53.0</u> | MSA Interval, ft. : <u>0.5</u> | Log Speed, ft/min.: <u>n/a</u> |

| | | |
|---------------------------------|---------------------------------|-------------------------------------|
| Log Run Number : <u>2</u> | Log Run Date : <u>1/21/1998</u> | Logging Engineer: <u>Jim Coates</u> |
| Start Depth, ft.: <u>52.0</u> | Counting Time, sec.: <u>200</u> | L/R : <u>L</u> Shield : <u>N</u> |
| Finish Depth, ft. : <u>92.5</u> | MSA Interval, ft. : <u>0.5</u> | Log Speed, ft/min.: <u>n/a</u> |

Borehole

50-11-08

Log Event A

Analysis Information

Analyst : R.G. McCainData Processing Reference : MAC-VZCP 1.7.9Analysis Date : 6/4/1998**Analysis Notes :**

The pre-survey and post-survey field verification measurements met acceptance criteria established for peak shape and system efficiency. Energy and resolution calibrations from appropriate verification spectra were used to establish the channel-to-energy conversion and peak resolution parameters used in processing the spectra acquired during the logging operation.

A casing correction factor for 0.50-in.-thick steel casing was used to determine concentration data over the entire depth. This factor most closely matches the combined thickness of the 4-in. and 6-in. casings. Concentrations are lower than actual because there is no allowance for the effects of the annular grout between the casings. A grout correction was not made because none is available. No correction was made to account for the water in the borehole; therefore, the reported concentrations are systematically low.

Log Plot Notes:

Separate plots show the man-made and naturally occurring radionuclides. Concentrations are shown as apparent concentrations to reflect the uncertainty associated with the dual casing and annular grout. The headings of the plots identify the specific gamma lines used to calculate concentrations. Uncertainty bars in the plots show statistical uncertainties for the measurements as 95-percent confidence intervals. Open circles on the plot indicate the MDL, which represents the lowest concentration at which positive identification of a gamma-ray peak is statistically defensible.

A combination plot includes man-made and natural radionuclides, the total gamma-ray count rate derived from the spectral data, and the historical gross gamma log. The gross gamma log plot displays the latest available digital data. No attempt has been made to adjust the depths of the gross gamma logs to coincide with the SGLS data. The SGLS total gamma ray plot reflects changes in KUT concentrations detected throughout the logged interval.